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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,009

03/31/2004

James Christopher Deepak

1880.004US1

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21186

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09/28/2006

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

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EXAMINER

PHAM, LONG

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/815,009

Applicant(s)

DEEPAK ET AL.

Examiner

Long Pham

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 30-46 is/are pending in the application.
- 4a) Of the above claim(s) 6-11, 30-39 and 44-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-17, and 40-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (publication no. 59085395).

With respect to claims 1 and 2, Shimizu et al. teach a lead comprising a lead solder layer or coating or plating or finish layer including 97.5 percent weight of lead, 1.5 percent weight of silver, and a balance of tin. See the English abstract.

With respect to claim 4, Shimizu et al. further teach that the lead or electrode 2 is coupled to a lead or electrode 4 of a surface mount component. See disclosed figures and English abstract.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 12-17, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (publication no. 59085395) in combination with McAndrew (US patent 6,066,402) and the applicant's admitted prior art (AAPA) of this application .

With respect to claims 1, 2, 12, 13, and 40, Shimizu et al. teach a lead comprising a lead solder layer or coating or plating or finish layer including 97.5 percent weight of lead, 1.5 percent weight of silver, and a balance of tin. See the English abstract.

With respect to claim 4, Shimizu et al. further teach that the lead or electrode 2 is coupled to a lead or electrode 4 of a surface mount component. See disclosed figures and English abstract.

With respect to claims 3 and 13, Shimizu et al. appear to fail to teach that lead solder layer or coating or plating further includes 9-11 percent weight of antimony.

McAndrew teaches a lead solder layer or coating or finish layer having 8.5 to 11.5 percent weight of antimony to achieve good mechanical strength. See the abstract.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to include antimony as taught by McAndrew in the lead solder layer or coating or plating or finish layer of Shimizu et al. to obtain the above benefit.

With respect to claims 5, 12, 14, 16, and 17, Shimizu et al. fail to teach coupling the lead to a electronic or downhole electronic components or circuitry or assembly (including amplifier or processor or pressure sensor) or transducer or assembly.

AAPA teaches using lead to couple electronic components or circuitry assembly (including downhole transducer or assembly) (including amplifier or processor or pressure sensor) to provide electrical connections between electronic components or circuitry assembly (including downhole transducer or assembly). See page 1 of this application.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the teaching of AAPA into the device Shimizu et al. to attain the above benefit.

With respect to claim 15, it is submitted that a downhole transducer would be inherently capable of measuring a downhole temperature or pressure.

Further with respect to claims 40 41, 42, and 43, AAPA further teaches coupling a electronic component (including a downhole transducer or processor or data acquisition system or filter) to a circuit trace in a circuit coupled to a lead.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-5, 12-17, and 40-43 have been considered but are moot in view of the new ground(s) of rejection.

In response to the applicant's arguments in the second full paragraph on page 8 of the response dated 06/29/06, it is submitted that process limitation does not carry patentability weight in a claim drawn to a structure or device. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). Further, it is submitted that a structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the

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**manufacturing process steps would be expected to impart distinctive structural characteristics to the final product.** See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979)

In response to the applicant's arguments in the second full paragraph on page 8 and the paragraph bridging pages 8 and 9 of the response dated 06/29/06, it is submitted that Shimizu et al. do not require that the lead solder layer or coating or plating or finish consisting of lead, tin, and silver. Further it is submitted the claims allow the zero percent of silver. Thus, Shimizu does not teach away from combining antimony, Shimizu teaches combining antimony into the solder or lead or electrode for a different reason, that is to achieve good mechanical strength for a specific range of temperature.

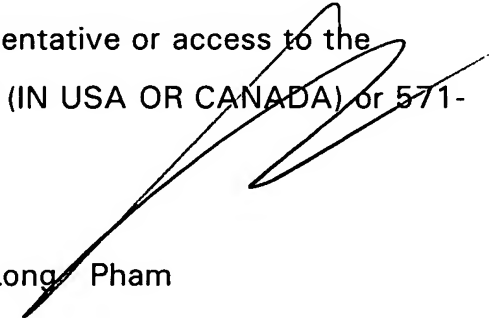
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on Mon-Frid, 10am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Long Pham  
Primary Examiner  
Art Unit 2814

LP